NAME OF WORK: "Construction of Samudhaya Bhavana Building and Bus shelter & providing grill fencing and other development works at 407 SFS park, 707 SFS park, Sri madivala machideva park and Major Sandeep Unnikrishnan Park of Yelahanka Assembly Constituency Under Amrutha Nagarothana Grants (PACKAGE-02)"

SECOND AND FINAL BILL

EMB

NAME OF WORK: "Construction of Samudhaya Bhavana Building and Bus shelter & providing grill fencing and other development works at 407 SFS park, 707 SFS park, Sri madivala machideva park and Major Sandeep Unnikrishnan Park of Yelahanka Assembly Constituency Under Amrutha Nagarothana Grants (PACKAGE-02)"

SECOND AND FINAL BILL

PRE MEASURMENT SHEET

Re Measurement

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK: "Construction of Samudhaya Bhavana Building and Bus shelter & providing grill fencing and other development works at 407 SFS park, 707 SFS park, Sri madivala machideva park and Major Sandeep Unnikrishnan Park of Yelahanka Assembly Constituency Under Amrutha Nagarothana Grants (PACKAGE-02)"

BOQ Item No	Description / Chainage	Nos	L	B1	B2	Avg width	Depth	Quantity	Unit
3	Earth work in surface excavation by mechanical means for lowering & leveling the ground without blasting for all works other than foundation in Ordinary/Soft rock & depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work In Ordinary/Soft rock upto 300mm depth.								
	Measurement Taken on	06/12/22							
	watchman shed (SUMP)	1	4.00	4.20	4.20	4.20	3.25	54.60	
	watchman shed Outside Area	1	5.70	2.00	2.00	2.00	0.30	3.42	
		1	6.20	1.50	1.50	1.50	0.30	2.79	
		1	7.70	0.65	1.20	0.93	0.30	2.14	
		1	7.70	1.10	1.25	1.18	0.30	2.71	
	CC roads	1	11.60	9.00	9.00	9.00	0.30	31.32	
		1	11.00	7.00	7.00	7.00	0.30	23.10	
		1	11.00	5.00	5.00	5.00	0.30	16.50	
		1	14.50	10.00	10.00	10.00	0.30	43.50	
		1	8.00	1.00	0.90	0.95	0.30	2.28	
		0.5	5.00	1.90	1.90	1.90	0.30	1.43	
	Tranformer fondation cycle track	1	4.50			1.70	1.50	11.48	
	cycle track	1	16.35			7.50	0.50	61.31	
		1	8.40			2.80	0.50	11.76	
		0.5	16.35			8.40	0.50	34.34	
	Deduction	-2	1.10			1.10	0.50	-1.21	
	For Building	1	14.50			10.50	0.30	45.68	
	Site area								
	Saradar Vallabhai Patel park								
	For Pathway	1	30.00			3.00	0.30	27.00	
		1	30.00			3.00	0.30	27.00	
		1	5.20			3.00	0.30	4.68	
						Total Executed Qty		405.81	Cum
4	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work.								
	Measurement Taken on	06/12/22							
	Near Cycle track	1	8.60	0.90	0.90	0.90	0.90	6.97	
						Total Executed Qty		6.97	Cum

Contractor

EJUS CONSULTANTS Consultant

Asst. Engineer

Asst. Executive Engin
Project Division
Asst. Executive Engineer
Yelahanka Zone
BBMP, Bangalore -

BOQ Item No	Description / Chainage	Nos	L	B1	B2	Avg width	Depth	Quantity	Unit
5	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work.Depth exceeding 1.5 m, but not exceeding 3 m.								
	Measurement Taken on 07/12/22 Cancl 22/11/22								
	For Building								
	Footings -F1	7	1.80			2.00	2.40	60.48	
	Footings -F2	3	2.00			2.40	2.40	34.56	
	Footings -F3	4	2.30			2.30	2.40	50.78	
	Footings -F4	3	2.00			2.00	2.40	28.80	
								Cl.bk	
	For Short walls	2	3.00			1.00	1.20	7.20	
		1	3.50			1.00	1.20	4.20	
	For Long walls	1	6.00			1.00	1.20	7.20	
		1	5.80			1.00	1.20	6.96	
		2	0.90			1.00	1.20	2.16	
								A.E.E. Project	
	For Sump	1	3.00			2.80	2.00	16.80	
							Total Executed Qty	219.14	Cum
6	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations and other similar works etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.								
	Measurement Taken on								
							Total Earth Work Qty	219.14	
							PCC Qty	-8.91	
							SSM QTY	-45.79	108.97
							Footing Concrete Qty	-34.18	
							Column concrete quantity upto plinth beam	-2.39	
							Sump Qty	-16.80	
							Total Executed Qty	111.08	Cum
7	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork shall be paid separately) Mix 1:3:6 (M10) Using 40 mm nominal size graded crushed coarse aggregates								
	Measurement Taken on 28/11/22 to 12/12/22 ~~28/11/22~~								
	watchman shed (SUMP)	1	4.00	3.80	3.80	3.80	0.15	2.28	
	watchman shed side	1	5.70	2.00	2.00	2.00	0.15	1.71	
		1	6.20	1.50	1.50	1.50	0.15	1.40	
		1	7.70	0.65	1.20	0.93	0.15	1.07	
		1	7.70	1.10	1.25	1.18	0.15	1.36	
								Cl.bk	
	cc roads	1	11.60	9.00	9.00	9.00	0.15	15.66	
		1	11.00	7.00	7.00	7.00	0.15	11.55	
		1	11.00	5.00	5.00	5.00	0.15	8.25	
		1	14.50	10.00	10.00	10.00	0.15	21.75	

Contractor

Consultant

Asst. Engineer

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore

Measurement

BOQ Item No	Description / Chainage	Nos	L	B1	B2	Avg width	Depth	Quantity	Unit
		1	8.00	1.00	0.90	0.95	0.15	1.14	
		0.5	5.00	1.90	1.90	1.90	0.15	0.71	
	tranformer fondation cycle track	1	4.40	1.50	1.50	1.50	0.15	0.99	
	Cycle track kerb	2	2.20	0.20	0.20	0.20	0.15	0.13	
		1	6.10	0.20	0.20	0.20	0.15	0.18	
		1	6.30	0.20	0.20	0.20	0.15	0.19	
		1	2.40	0.20	0.20	0.20	0.15	0.07	
		1	2.20	0.20	0.20	0.20	0.15	0.07	
		1	3.50	0.20	0.20	0.20	0.15	0.11	
		1	3.60	0.20	0.20	0.20	0.15	0.11	
		1	2.20	0.20	0.20	0.20	0.15	0.07	
		1	2.30	0.20	0.20	0.20	0.15	0.07	
		1	4.20	0.20	0.20	0.20	0.15	0.13	
		1	3.50	0.20	0.20	0.20	0.15	0.11	
	cycle track continue portion	1	16.35			7.50	0.15	18.39	
		1	8.40			2.80	0.15	3.53	
		0.5	16.35			8.40	0.15	10.30	
	Deduction	-2	1.10			1.10	0.15	-0.36	
	Near Cycle track for SSM								
	PCC	1	8.60			0.90	0.15	1.16	
	Coping	1	8.60			0.55	0.10	0.47	
	For Building								
	Footings -F1	7	1.60			1.80	0.15	3.02	
	Footings -F2	3	1.80			2.20	0.15	1.78	
	Footings -F3	4	2.10			2.10	0.15	2.65	
	Footings -F4	3	1.80			1.80	0.15	1.46	
	For Short walls	2	3.00			1.00	0.15	0.90	
		1	3.50			1.00	0.15	0.53	
	For Long walls	1	6.00			1.00	0.15	0.90	
		1	5.80			1.00	0.15	0.87	
		2	0.90			1.00	0.15	0.27	
	For Sump	1	3.00			2.80	0.15	1.26	
	Saradar Vallabhai Patel park								
	For Pathway	1	30.00			3.00	0.13	11.25	
		1	30.00			3.00	0.13	11.25	
		1	5.20			3.00	0.13	1.95	
	For Kerb	2	30.00			0.20	0.10	1.20	
		2	24.00			0.20	0.10	0.96	
	Building side Pcc	1	15.00			0.30	0.13	0.56	
		1	9.50			0.60	0.13	0.71	
						Total Executed Qty		144.10	Cum

Contractor

Consultant

Asst. Engineer

Asst. Executive Engineer
Project Division
Yelahanka
BBMP, Bangalore - 92

BOQ Item No	Description / Chainage	Nos	L	B1	B2	Avg width	Depth	Quantity	Unit
8	Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately)Mix 1:2:4 (M15) Using 20 mm nominal size graded crushed coarse aggregates								
	Measurement Taken on	12/12/22							
	For Building								
	For Short walls	3	9.30			0.45	0.10	1.29	
	For Long walls	2	12.00			0.45	0.10	1.08	
		2	3.10			0.45	0.10	0.28	
	watchman shed (SUMP)Raft	1	3.30			3.80	0.20	2.51	
	For building								
	Flooring	1	8.90			12.00	0.15	16.02	
	Stage	1	2.10			4.00	0.15	1.26	
	Deduction								
	For Column								
	C1	-10	0.45			0.20	0.10	-0.09	
	C2	-4	0.45			0.30	0.10	-0.05	
						Total Executed Qty		22.30	Cum
10	Providing Coursed rubble masonry (first sort) with hard stone in foundation and plinth with Cement mortar 1:6 (1 cement : 6 coarse sand)								
	Measurement Taken on	15/12/22							
	Near Cycle track for SSM								
		1	8.60			0.75	0.20	1.29	
		1	8.60			0.60	0.40	2.06	
		1	8.60			0.55	0.20	0.95	
						Total Executed Qty		4.30	Cum
13	Providing and laying in position Reinforced cement concrete M20 Using 20 mm nominal size graded crushed coarse aggregates for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications.								
	Measurement Taken on	11/01/23							
	watchman shed side	1	5.70	2.00	2.00	2.00	0.15	1.71	
		1	6.20	1.50	1.50	1.50	0.15	1.40	
		1	7.70	0.65	1.20	0.93	0.15	1.07	
		1	7.70	1.10	1.25	1.18	0.15	1.36	
						Total Executed Qty		5.54	Cum
14	Supplying, Fitting and Placing un-coated TMT bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications.								
	Measurement Taken on	12/11/22							
	sump cycle track								

Contractor

Consultant

Asst. Engineer

Asst. Executive Engineer
Yelahanka Division
BBMP, Bangalore - 92

Pre Measurement

BOQ Item No	Description / Chainage	Nos	L	B1	B2	Avg width	Depth	Quantity	Unit
	12mm dia bars	2	3.80			31.00	0.89	209.68	
	12mm dia bars	2	3.80			31.00	0.89	209.68	
	chairs	1	0.60			25.00	0.39	5.85	
						Sub Total		425.22	
							Total Executed Qty	0.43	Tonne
21	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.								
	Measurement Taken on	25/11/22							
	cycle track continue portion	1	16.35			7.50	0.23	28.20	
		1	8.40			2.80	0.23	5.41	
		0.5	16.35			8.40	0.23	15.79	
	For Building	1	9.50			0.90	0.23	1.97	
		1	15.00			0.60	0.23	2.07	
	Deduction	-2	1.10			1.10	0.23	-0.56	
							Total Executed Qty	52.89	Cum
33	Loading and Unloading of Stone Boulder/Stone aggregates/Sand/Kankar/Moorum. (Tipper 5.5 m3) (KPWD SR 2021-22, Volume-III, Item No.1.1 A, Page No.3) (Rs.118.00 per Cum) Cost of Haulage Excluding Loading and Unloading Case-1 : Surfaced Road Taking output 10 t load and lead 10 km = 100 t.km								
	Measurement Taken on	405.81 + 6.97 + 219.14 = 631.92							
							Quantity From Item No. (3+4+5)	631.92	
							Total Executed Qty	631.92	Cum
44	Providing Thermo-Mechanically Treated bars of grade Fe-500D or more Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position, binding and anchoring to adjacent members whereever necessary complete as per Design including cost of material, labour, usage charges complete as per specifications.								
	Measurement Taken on	21/2/23							
	Ground Floor	From Steel Calculation Page No.							
							Total Executed Qty	13429.47	Kgs
45	Providing Thermo-Mechanically Treated bars of grade Fe-500D or more Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position, binding and anchoring to adjacent members whereever necessary complete as per Design including cost of material, labour, usage charges complete as per specifications.								
	Measurement Taken on	05/04/23							
	First Floor	From Steel Calculation Page No.							
							Total Executed Qty	8252.29	Kgs
52	Providing and laying in position Reinforced cement concrete M25 Using 20 mm nominal size graded crushed coarse aggregates for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications.								
	Measurement Taken on	23/12/22							
	For Column								

A.E.E. (Project)

Contractor

Consultant

Asst. Engineer

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP Bangalore - 92

Asst. Executive Engineer

BOQ Item No	Description / Chainage	Nos	L	B1	B2	Avg width	Depth	Quantity	Unit
	C1 (From footing to Plinth)	10	0.45			0.20	1.50	1.35	
	C2 (From footing to Plinth)	4	0.45			0.30	1.50	0.81	
	C3 (From footing to Plinth)	3	0.25			0.25	1.50	0.28	
							Total Executed Qty	2.44	Cum
53	Providing and laying in position Reinforced cement concrete M25 Using 20 mm nominal size graded crushed coarse aggregates for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications.								
	Measurement Taken on	02/12/22							
	Footings -F1	7	1.60			1.80	0.60	12.10	
	Footings -F2	3	1.80			2.20	0.60	7.13	
	Footings -F3	4	2.10			2.10	0.60	10.58	
	Footings -F4	3	1.80			1.80	0.60	5.83	
							Total Executed Qty	35.64	Cum
116	Earth work excavation for pipeline trenches in all kinds of soils bymechanical means above 600 mm trench width as per drawing andtechnical specifications, including setting out, construction of shoring,strutting, barricading, caution lights, bracing, using sight rails & boningrods at every 100 mm whevere necessary as directed, removal ofstumps and other deleterious matter, dressing of sides and levellingthe bottom of trench to the extent required , utilising the availableexcavated earth locally for the work etc., and all other appurtenancescomplete in the following strata.								
	Measurement Taken on	28/8/23							
	For Stoneware pipes	1	25.00			0.60	0.90	13.50	
	For Inspection chambers	2	0.80			0.80	1.00	1.28	
							TOTAL Executed Qty	14.78	Cum
117	Concealed Conduit System: Supplying .... Mm dia 2mm2.5mm Thick heavy gauge PVC conduit pipe with suitable size bends, metal/PVC junction boxes adhesive paste etc... and running before concreting th eslab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be convered using PVC end enclosures. run with 18SWG GI fish wire wherever necessary								
	Measurement Taken on	28/3/23							
	1.2.1) 19/20mm dia 2mm thick	1	75.00					75.00	
							TOTAL Executed Qty	75.00	M
118	1.2.2) 25mm dia 2mm thick								
		1	50.00					50.00	
							TOTAL Executed Qty	50.00	M
119	1.2.3) 32mm dia 2.5mm thick								
		1	50.00					50.00	
							TOTAL Executed Qty	50.00	M
120	57.07) PVC pipe-50mm dia								
		1	300.00					300.00	
							TOTAL Executed Qty	300.00	M
121	57.07) PVC pipe-75mm dia								
		1	75.00					75.00	
							TOTAL Executed Qty	75.00	M

Contractor

Consultant

Asst. Engineer

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore

BOQ Item No	Description / Chainage	Nos	L	B1	B2	Avg width	Depth	Quantity	Unit
122	57.07) PVC pipe-100mm dia							75.00	
		1	75.00						
							TOTAL Executed Qty	75.00	M
123	Supplying heavy gauge PVC conduit pipe..... dia confirming to IS 2509 with suitable size benda, junction boxes, adhesive paste etc., and fixing using inverted wood plugs in case of RCC ceiling and RCC wall stone structure or rawl plugs in case of brick walls and cement plastering damaged portion using heavy gauge saddles at an interval of 700mm using NF screws								
	Measurement Taken on	28/8/23						75.00	
		1	75.00						
							TOTAL Executed Qty	75.00	M
124	1.3.2) 25 mm dia 2 mm thick							75.00	
		1	75.00						
							TOTAL Executed Qty	75.00	M
125	1.3.2) 25 mm dia 2 mm thick							50.00	
		1	50.00						
							TOTAL Executed Qty	50.00	M
126	1.3.4) 40 mm dia 2.5 mm thick							50.00	
		1	50.00						
							TOTAL Executed Qty	50.00	M
139	Supplying and wiring adopting loop system in existing PVC Conduit / casing capping using copper PVC insulated multi strand 2x1.5Sqmm copper wire without switch, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet.								
	Measurement Taken on	28/8/23							
	a)Short point upto 3Mtr from tapping point to out let via switch box							25.00	
		25							
							TOTAL Executed Qty	25.00	No's
140	b) Medium point above 3Mtr up to 6Mtr from tapping point to out let via switch box							25.00	
		25							
							TOTAL Executed Qty	25.00	No's
141	2.2.3)Long point above 6Mtr upto 10Mtr from tapping point to out let via switch box							3.00	
		3							
							TOTAL Executed Qty	3.00	No's
							NOW TO BE PAID	3.00	
142	2.2.4)Two outlet in a row,above 3Mtr upto 6Mtr from tapping point to out let via switches							5.00	
		5							
							TOTAL Executed Qty	5.00	No's
143	2.2.5)Three outlet in a row, above 6Mts upto 10Mtr from tapping point to out let via							5.00	
		5							
							TOTAL Executed Qty	5.00	No's
184	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:confirming to latest amendments.								
	Measurement Taken on	28/8/23						200.00	
		200							
							TOTAL Executed Qty	200.00	M
185	b. 1.5 sqmm							430.00	
		430							

Contractor

Consultant

Asst. Engineer

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

Asst. Executive Engineer

Measurement

BOQ Item No	Description / Chainage	Nos	L	B1	B2	Avg width	Depth	Quantity	Unit
							TOTAL Executed Qty	430.00	M
186	2.3.3) 2.5 sqmm							390.00	
		390					TOTAL Executed Qty	390.00	M
187	2.3.4) 4 sqmm							350.00	
		350					TOTAL Executed Qty	350.00	M
188	C.6 sqmm							390.00	
		390					TOTAL Executed Qty	390.00	M
189	Supplying and fixing of PVC casing and capping on the wall or ceilng using necessary materials like bends, screws at an interval of 300mm .... Etc as required.								
	Measurement Taken on	28/8/23						50.00	
		50					TOTAL Executed Qty	50.00	M
190	Supplying PVC/GI flexible conduit pipe....mm dia fixing on surface over inverted wooden plugs or phill plugs or rawl plugs and clamped using heavy gauge saddles at an interval of 300mm using NF screws and either end of the pipe terminated completely.							50.00	
		50					TOTAL Executed Qty	50.00	No's
191	Extra for supplying 4mm thick white plastic plate and covering for junction boxes of size 110mm conduit using necessary machine screws.							20.00	
		20					TOTAL Executed Qty	20.00	No's
192	Supplying a 50mm wooden plug, tapered from 50x50mm to 25x25mm and fixing by using binding wire before concreting a roof slap.							20.00	
		20					TOTAL Executed Qty	20.00	No's
193	Supplying and fixing of slim box fitting, made out of CRCA Sheet metal body with locking type holder completely wired. Excluding Ballast & Flouresent Tube. 1 x 4' Tube light fitting.							10.00	
		10					TOTAL Executed Qty	10.00	Each
207	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge Concealed work, including cutting chases and making good the walls etc. 15mm nominal dia pipes.								
	Measurement Taken on	22/8/28							
		1	50.00					50.00	
							TOTAL Executed Qty	50.00	M

Contractor

TEJUS CONSULTANTS Consultant

Asst. Engineer

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

Asst. Executive Engineer

BOQ Item No	Description / Chainage	Nos	L	B1	B2	Avg width	Depth	Quantity	Unit
208	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge Concealed work, including cutting chases and making good the walls etc. 20mm nominal dia pipes.								
		1	50.00					50.00	
							TOTAL Executed Qty	50.00	M
209	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge Concealed work, including cutting chases and making good the walls etc. 25mm nominal dia pipes.								
		1	50.00					50.00	
							TOTAL Executed Qty	50.00	M
211	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. Internal work - Exposed on wall 32 mm nominal dia Pipes								
		1	50.00					50.00	
							TOTAL Executed Qty	50.00	M
212	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge Concealed work, including cutting chases and making good the walls etc. 32mm nominal dia pipes.								
		1	35.00					35.00	
							TOTAL Executed Qty	35.00	M
213	Constructing brick masonry chamber of internal dimension 600x450mm and depth of 600mm (inner dimensions) with modular bricks of CD 75 in cement mortar 1:6, bed concrete 150mm thick with 1:3:6, plastering 12 mm thick with cement mortar 1:4, CC 1:2:4 coping 75mm thk for fixing CI cover & frame etc. excluding the cost of CI frame and cover.								
		1	3.00					3.00	
							TOTAL Executed Qty	3.00	M

Contractor

Consultant

Asst. Engineer

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 9

: Measurement

BOQ em No	Description / Chainage	Nos	L	B1	B2	Avg width	Depth	Quantity	Unit
214	Supplying, laying and jointing HDPE pipes of specified grade and conforming to IS 4984-2016 with latest ammendments and conveying to work site including loading and unloading at both destinations and rolling and lowering into trenches, laying true to line and jointing of pipes and specials with electrofusion welding, giving hydraulic test as per relevant ISS with all lead and lifts including encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excation, testing and commissioning. The rate is exclusive of required specials and fittings wherever necessary like saddle Tee, stub ends, flanged sets, bedns, reducers etc. complete (Contractor will make his own arrangements for procuring water for testing) etc HDPE Grade PE100-PN6.0,200mm dia.								
		1	50.00					50.00	
							TOTAL Executed Qty	50.00	M
215	Providing and fixing brass bib cock of approved quality : 20 mm nominal bore								
		1	15.00					15.00	
							TOTAL Executed Qty	15.00	M
216	Providing and fixing brass stop cock of approved quality : 20 mm nominal bore								
		1	5.00					5.00	
							TOTAL Executed Qty	5.00	M
217	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber 150 x 100 mm size P type With Non Modular common burnt clay bricks of designation 3.5 & with water tight C.I. cover with frame of 300 x300 mm size								
		12						12.00	
							TOTAL Executed Qty	12.00	Each
E4	Providing Size Stone masonry with hard stone in foundation & plinth with Cement mortar 1:6 (1 cement : 6 coarse sand)								
	Date :								
	Attur bus stop yalahanka								
		ssm							
		1	11.80	0.45			0.60	3.19	
		1	10.00	0.45			0.60	2.70	
		3	2.10	0.45			0.60	1.70	
	Krishna oil mill bus stop								
		ssm							
		1	11.80	0.45			0.60	3.19	
		1	10.00	0.45			0.60	2.70	
		3	2.10	0.45			0.60	1.70	
	NCC Appartment doddaballapur main road bus stop								
		ssm							
		1	11.80	0.45			0.60	3.19	
		1	10.00	0.45			0.60	2.70	
		3	2.10	0.45			0.60	1.70	
	shivamandir bus stop								
		1	11.80	0.45			0.60	3.19	
		1	10.00	0.45			0.60	2.70	
		3	2.10	0.45			0.60	1.70	
	For Building								
	For Short walls	3	9.30			0.90	0.40	10.04	
		3	9.30			0.60	0.40	6.70	
		3	9.30			0.45	0.40	5.02	
	For Long walls	2	12.00			0.90	0.40	8.64	

A.E.E. (Project)

Contractor

Consultant

Asst. Engineer

08/12/22

Asst. Executive Engineer
Project Division
Yelahanka
BBMP, Bangalore - 92

BOQ Item No	Description / Chainage	Nos	L	B1	B2	Avg width	Depth	Quantity	Unit
		2	12.00			0.60	0.40	5.76	
		2	12.00			0.45	0.40	4.32	
	For Long walls	2	3.10			0.90	0.40	2.23	
		2	3.10			0.60	0.40	1.49	
		2	3.10			0.45	0.40	1.12	
							TOTAL Executed Qty	75.67	Cum

Contractor

Consultant

Asst. Engineer

08/12/22

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 93

NAME OF WORK :"Construction of Samudhaya Bhavana Building and Bus shelter & providing grill fencing and other development works at 407 SFS park, 707 SFS park, Sri madivala machideva park and Major Sandeep Unnikrishnan Park of Yelahanka Assembly Constituency Under Amrutha Nagarothana Grants (PACKAGE-02)"

Agency	Sri.K Lakshmi Narayana Reddy (M/S.LNR Ventures Constructions pvt.Ltd)
Description	Steel calculation sheet

PREMEASUREMENT SHEET - Second & Final Bill

Sl NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	L	Crank length (42d)	Actual Length	Total Length	Weight	Total weight
			mm			m	m	m	m	kg/m	Kg's
44	Providing Thermo-Mechanically Treated bars of grade Fe-500D or more Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position, binding and anchoring to adjacent members whereever necessary complete as per Design including cost of material, labour, usage charges complete as per specifications.										
	Measurements taken on 30/11/23 to 21/12/23, 21/2/23, 13/2/23,										
1	Symmetic Footings										
	F1	7									
	Bars Along Long Direction	1	12	25	175	2.10	0.0	2.10	367.50	0.89	326.27
	Bars Along Short Direction	1	12	25	175	2.10	0.0	2.10	367.50	0.89	326.27
	F2										
	Bars Along Long Direction	3	12	25	75	2.20	0.0	2.20	165.00	0.89	146.49
	Bars Along Short Direction	3	12	24	72	2.40	0.0	2.40	172.80	0.89	153.41
	F3										
	Bars Along Long Direction	4	12	30	120	2.50	0.0	2.50	300.00	0.89	266.34
	Bars Along Short Direction	4	12	30	120	2.50	0.0	2.50	300.00	0.89	266.34
	F4										
	Bars Along Long Direction	3	12	29	87	2.30	0.0	2.30	200.10	0.89	177.65
	Bars Along Short Direction	3	12	29	87	2.30	0.0	2.30	200.10	0.89	177.65
									Sub Total		1840.44
2	COLUMNS										
	upto Plinth Beam										
	C1	4	16	10	40	2.82	0.00	2.82	112.80	1.58	178.04
	Rectangle Rings #8 @ 200 c/c	4	8	15	60	1.30	0.00	1.30	78.00	0.39	30.78
	Rectangle Rings #8 @ 200 c/c	4	8	15	60	1.00	0.00	1.00	60.00	0.39	23.68
	C2	6	12	6	36	2.64	0.00	2.64	95.04	0.89	84.38
		6	16	4	24	2.82	0.00	2.82	67.68	1.58	106.82
	Rectangle Rings #8 @ 200 c/c	6	8	15	90	1.30	0.00	1.30	117.00	0.39	46.17

Checked
A.E.E. (Project)

CONTRACTOR

CONSULTANT

ASSISTANT ENGINEER

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP-Bangalore - 92

ASSISTANT EXECUTIVE ENGINEER

Sl NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	L	Crank length (42d)	Actual Length	Total Length	Weight	Total weight
			mm			m	m	m	m	kg/m	Kg's
	Rectangle Rings #8 @ 200 c/c	6	8	15	90	1.00	0.00	1.00	90.00	0.39	35.51
	C3	4	16	12	48	2.82	0.00	2.82	135.36	1.58	213.64
	Rectangle Rings #8 @ 200 c/c	4	8	15	60	1.50	0.00	1.50	90.00	0.39	35.51
	Rectangle Rings #8 @ 200 c/c	4	8	15	60	1.20	0.00	1.20	72.00	0.39	28.41
	C4	3	12	8	24	2.64	0.00	2.64	63.36	0.89	56.25
	Rectangle Rings #8 @ 200 c/c	3	8	15	45	0.92	0.00	0.92	41.40	0.39	16.34
									Sub Total		**855.52**
3	**PLINTH BEAM**										
	PB1	3									
	PB1 Along Shorter Direction										
	top bars		16	2	6	10.20	0.00	10.20	61.20	1.58	96.59
	bottom bars		20	2	6	10.20	0.00	10.20	61.20	2.47	150.93
			12	2	6	9.30	0.00	9.30	55.80	0.89	49.54
	2L-#8mm @200c/cstirrups		8	79	238	1.36	0.00	1.36	324.20	0.39	127.93
	PB1	2									
	PB1 Along Longer Direction										
	top bars		16	2	4	12.90	0.00	12.90	51.60	1.58	81.44
	bottom bars		20	2	4	12.90	0.00	12.90	51.60	2.47	127.25
			12	2	4	12.00	0.00	12.00	48.00	0.89	42.62
	2L-#8mm @200c/cstirrups		8	97	290	1.36	0.00	1.36	393.95	0.39	155.45
	PB1	2									
	PB1 Along Longer Direction										
	top bars		16	2	4	3.90	0.00	3.90	15.60	1.58	24.62
	bottom bars		20	2	4	3.90	0.00	3.90	15.60	2.47	38.47
			12	2	4	3.00	0.00	3.00	12.00	0.89	10.65
	2L-#8mm @200c/cstirrups		8	31	93	1.36	0.00	1.36	126.48	0.39	49.91
									Sub Total		**955.40**
4	**COLUMNS**										
	upto Roof Beam										
	C1	4	16	10	40	3.65	0.00	3.65	146.00	1.58	230.44
	Rectangle Rings #8 @ 200 c/c	4	8	20	80	1.30	0.00	1.30	104.00	0.39	41.04
	Rectangle Rings #8 @ 200 c/c	4	8	20	80	1.00	0.00	1.00	80.00	0.39	31.57

CF 419.85

303.04

CONTRACTOR

CONSULTANT

ASSISTANT ENGINEER

ASSISTANT EXECUTIVE ENGINEER

A.E.E. (Project)

Asst. Executive Engineer
Project Division
Yelahanka Zone

Sl NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	L	Crank length (42d)	Actual Length	Total Length	Weight	Total weight
			mm			m	m	m	m	kg/m	Kg's
	C2	6	12	6	36	3.65	0.00	3.65	131.40	0.89	116.66
		6	16	4	24	3.65	0.00	3.65	87.60	1.58	138.26
	Rectangle Rings #8 @ 200 c/c	6	8	20	120	1.30	0.00	1.30	156.00	0.39	61.56
	Rectangle Rings #8 @ 200 c/c	6	8	20	120	1.00	0.00	1.00	120.00	0.39	47.35
	C3	4	16	12	48	3.65	0.00	3.65	175.20	1.58	276.52
	Rectangle Rings #8 @ 200 c/c	4	8	20	80	1.50	0.00	1.50	120.00	0.39	47.35
	Rectangle Rings #8 @ 200 c/c	4	8	20	80	1.20	0.00	1.20	96.00	0.39	37.88
	C4	3	12	8	24	3.65	0.00	3.65	87.60	0.89	77.77
	Rectangle Rings #8 @ 200 c/c	3	8	20	60	0.92	0.00	0.92	55.20	0.39	21.78
									Sub Total		1128.17
	Lintel Beam										
	LB (150X150)										
	top bars	1	12	2	2	9.30	0.00	9.30	18.60	0.89	16.51
	bottom bars	1	12	2	2	9.30	0.00	9.30	18.60	0.89	16.51
	2LGD 8# stirrups @ 150 C/C	1	8	63	63	0.60	0.00	0.60	37.80	0.39	14.92
	LB (200X150)										
	top bars	2	12	2	4	9.30	0.00	9.30	37.20	0.89	33.03
	bottom bars	2	12	2	4	9.30	0.00	9.30	37.20	0.89	33.03
	2LGD 8# stirrups @ 150 C/C	2	8	63	126	0.70	0.00	0.70	88.20	0.39	34.80
	LB (200X150)										
	top bars	2	12	2	4	12.00	0.00	12.00	48.00	0.89	42.62
	bottom bars	2	12	2	4	12.00	0.00	12.00	48.00	0.89	42.62
	2LGD 8# stirrups @ 150 C/C	2	8	81	162	0.70	0.00	0.70	113.40	0.39	44.75
	LB (150X150)										
	top bars	1	12	2	2	3.00	0.00	3.00	6.00	0.89	5.33
	bottom bars	1	12	2	2	3.00	0.00	3.00	6.00	0.89	5.33
	2LGD 8# stirrups @ 150 C/C	1	8	21	21	0.70	0.00	0.70	14.70	0.39	5.80
									Sub Total		295.23
	Chajja										
	Ground Floor										
	W										

CONTRACTOR

CONSULTANT

ASSISTANT ENGINEER

ASSISTANT EXECUTIVE ENGINEER

A.E.E. (Project)
BBMP, Bangalore - 92

Sl NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	L	Crank length (42d)	Actual Length	Total Length	Weight	Total weight
			mm			m	m	m	m	kg/m	Kg's
	Main bars 8# @130 c/c at top		10	13	25	0.55	0.00	0.55	13.79	0.62	8.50
	Distribution bars 8# @200 c/c		8	4	8	1.50	0.00	1.50	11.25	0.39	4.44
	W	2									
	Main bars 8# @130 c/c at top		10	13	25	0.90	0.00	0.90	22.57	0.62	13.91
	Distribution bars 8# @200 c/c		8	6	11	1.50	0.00	1.50	16.50	0.39	6.51
	W1	1									
	Main bars 8# @130 c/c at top		10	10	10	0.55	0.00	0.55	5.63	0.62	3.47
	Distribution bars 8# @200 c/c		8	4	4	1.20	0.00	1.20	4.50	0.39	1.78
		1									
	Main bars 8# @130 c/c at top		10	10	10	0.90	0.00	0.90	9.21	0.62	5.68
	Distribution bars 8# @200 c/c		8	6	6	1.20	0.00	1.20	6.60	0.39	2.60
									Sub Total		46.89
	Roof Beam										
	B1(200X450)	1									
	top bars		16	2	2	16.15	0.00	16.15	32.30	1.58	50.98
	Top extra bars		12	2	2	3.00	0.00	3.00	6.00	0.89	5.33
			16	2	2	2.70	0.00	2.70	5.40	1.58	8.52
			12	3	3	7.90	0.00	7.90	23.70	0.89	21.04
	bottom bars		20	2	2	14.85	0.00	14.85	29.70	2.47	73.24
	bottom extra bars		12	2	2	9.00	0.00	9.00	18.00	0.89	15.98
	2LGD 8# stirrups @ 100 C/C		8	150	150	1.30	0.00	1.30	194.35	0.39	76.69
	B2(200X600)	2									
	top bars		20	3	6	12.90	0.00	12.90	77.40	2.47	190.88
	top extra bars		16	3	6	5.00	0.00	5.00	30.00	1.58	47.35
			16	3	6	5.85	0.00	5.85	35.10	1.58	55.40
	bottom bars		20	3	6	9.80	0.00	9.80	58.80	2.47	145.01
	bottom extra bars		20	3	6	5.90	0.00	5.90	35.40	2.47	87.30
			16	1	2	4.92	0.00	4.92	9.84	1.58	15.52
			16	2	4	4.89	0.00	4.89	19.57	1.58	30.88
	2LGD 8# stirrups @ 125 C/C		10	72	144	1.60	0.00	1.60	231.04	0.62	142.44

Checked
A.E.E. (Project)

CONTRACTOR

CONSULTANT

ASSISTANT ENGINEER

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

ASSISTANT EXECUTIVE ENGINEER

Sl NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	L	Crank length (42d)	Actual Length	Total Length	Weight	Total weight
			mm			m	m	m	m	kg/m	Kg's
	B2(200X450)	1									
	top bars		16	3	3	5.95	0.00	5.95	17.85	1.58	28.17
	bottom bars		20	2	2	3.85	0.00	3.85	7.70	2.47	18.99
	2LGD 8# stirrups @ 125 C/C		8	25	25	1.30	0.00	1.30	31.98	0.39	12.62
	B3(200X450)	1									
	top bars		16	2	2	12.80	0.00	12.80	25.60	1.58	40.41
	top extra bars		12	3	3	1.80	0.00	1.80	5.40	0.89	4.79
			16	2	2	2.60	0.00	2.60	5.20	1.58	8.21
			12	3	3	4.85	0.00	4.85	14.55	0.89	12.92
	bottom bars		20	2	2	12.50	0.00	12.50	25.00	2.47	61.65
	bottom extra bars		12	3	3	5.00	0.00	5.00	15.00	0.89	13.32
			12	2	2	4.50	0.00	4.50	9.00	0.89	7.99
			12	2	2	2.05	0.00	2.05	4.10	0.89	3.64
	2LGD 8# stirrups @ 100 C/C		8	119	119	1.30	0.00	1.30	154.70	0.39	61.04
	B4(200X450)	1									
	top bars		16	2	2	9.90	0.00	9.90	19.80	1.58	31.25
	top extra bars		12	2	2	1.50	0.00	1.50	3.00	0.89	2.66
			12	2	2	5.20	0.00	5.20	10.40	0.89	9.23
	bottom bars		20	2	2	9.90	0.00	9.90	19.80	2.47	48.83
	bottom extra bars		12	1	1	5.60	0.00	5.60	5.60	0.89	4.97
	2LGD 8# stirrups @ 175 C/C		8	52	52	1.30	0.00	1.30	67.41	0.39	26.60
	B5(200X450)	1									
	top bars		16	2	2	9.90	0.00	9.90	19.80	1.58	31.25
	top extra bars		12	2	2	1.50	0.00	1.50	3.00	0.89	2.66
			12	2	2	5.20	0.00	5.20	10.40	0.89	9.23
	bottom bars		20	2	2	9.90	0.00	9.90	19.80	2.47	48.83
	bottom extra bars		12	1	1	5.60	0.00	5.60	5.60	0.89	4.97
	2LGD 8# stirrups @ 175 C/C		8	60	60	1.30	0.00	1.30	78.43	0.39	30.95
	B6(200X450)	1									
	top bars		16	2	2	9.90	0.00	9.90	19.80	1.58	31.25

CONTRACTOR

CONSULTANT

ASSISTANT ENGINEER

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

ASSISTANT EXECUTIVE ENGINEER

Sl NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	L	Crank length (42d)	Actual Length	Total Length	Weight	Total weight
			mm			m	m	m	m	kg/m	Kg's
	top extra bars		12	2	2	1.50	0.00	1.50	3.00	0.89	2.66
			12	2	2	5.20	0.00	5.20	10.40	0.89	9.24
	bottom bars		20	2	2	9.90	0.00	9.90	19.80	2.47	48.84
	bottom extra bars		12	1	1	5.60	0.00	5.60	5.60	0.89	4.97
	2LGD 8# stirrups @ 175 C/C		8	52	52	1.30	0.00	1.30	67.41	0.39	26.60
	B7(200X450)	1									
	top bars		16	2	2	5.10	0.00	5.10	10.20	1.58	16.10
	top extra bars		12	2	2	3.20	0.00	3.20	6.40	0.89	5.68
	bottom bars		20	4	4	5.10	0.00	5.10	20.40	2.47	50.31
	bottom extra bars		12	1	1	3.50	0.00	3.50	3.50	0.89	3.11
	2LGD 8# stirrups @ 175 C/C		8	26	26	1.30	0.00	1.30	33.24	0.39	13.12
	B2(200X450)	1									
	top bars		16	2	2	3.45	0.00	3.45	6.90	1.58	10.89
			12	2	2	2.60	0.00	2.60	5.20	0.89	4.62
	bottom bars		20	2	2	3.45	0.00	3.45	6.90	2.47	17.02
	2LGD 8# stirrups @ 125 C/C		8	24	24	1.30	0.00	1.30	30.94	0.39	12.21
	Stair Case beam	1									
	top bars		16	2	2	3.45	0.00	3.45	6.90	1.58	10.89
	bottom bars		20	2	2	3.45	0.00	3.45	6.90	2.47	17.02
	2LGD 8# stirrups @ 125 C/C		8	24	24	1.30	0.00	1.30	30.94	0.39	12.21
									Sub Total		**1788.49**
	Roof Slab										
	Slab between Grid 1-2 and grid A-D	1									
	10# @100 c/c main bars alt	1	12	90	90	4.20	1.01	5.21	468.72	0.89	416.14
	10# @180 c/c Distrubution	1	10	36	36	8.90	0.84	9.74	350.64	0.62	216.18

CONTRACTOR

CONSULTANT

ASSISTANT ENGINEER

A.E.E. (Project)

ASSISTANT EXECUTIVE ENGINEER
Yelahanka 2nd
BBMP, Bangalore - 92

Sl NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	L	Crank length (42d)	Actual Length	Total Length	Weight	Total weight
			mm			m	m	m	m	kg/m	Kg's
	Slab between Grid 2-3 and grid A-D	1									
	10# @100 c/c main bars alt	1	12	90	90	4.65	1.01	5.66	509.22	0.89	452.09
	10# @180 c/c Distrubution	1	10	40	40	8.90	0.84	9.74	387.17	0.62	238.70
	Slab between Grid 3-4 and grid A-D	1									
	10# @100 c/c main bars alt	1	12	90	90	4.25	1.01	5.26	473.22	0.89	420.13
	10# @180 c/c Distrubution	1	10	36	36	8.90	0.84	9.74	354.70	0.62	218.68
	Slab between Grid 1-2 and grid D-E	1									
	10# @100 c/c main bars alt	1	12	50	50	4.20	1.01	5.21	257.80	0.89	228.87
	8# @100 c/c Distrubution	1	10	43	43	4.85	0.84	5.69	244.67	0.62	150.85
	Slab between Grid 2-3 and grid D-E	1									
	10# @100 c/c main bars alt	1	12	50	50	4.65	1.01	5.66	280.07	0.89	248.65
	10# @100 c/c Distrubution	1	10	48	48	4.85	0.84	5.69	270.28	0.62	166.63
	Slab between Grid 3-4 and grid D-E	1									
	10# @100 c/c main bars alt	1	12	45	45	4.25	1.01	5.26	236.61	0.89	210.07
	8# @100 c/c Distrubution	1	10	44	44	4.40	0.84	5.24	227.94	0.62	140.53
	Slab between Grid 1-3 and grid E-F	1									
	10# @100 c/c main bars alt	1	12	44	44	2.85	1.01	3.86	169.75	0.89	150.71
	10# @100 c/c Distrubution	1	10	30	30	4.30	0.84	5.14	151.63	0.62	93.49
	chairs	2	8	32	64	14.20	0.67	14.87	951.81	0.39	375.57
		2	8	48	97	9.30	0.00	9.30	899.00	0.39	354.73
									Sub Total		4082.03
	STAIRCASE										

A.E.E. (Project)

CONTRACTOR

CONSULTANT

ASSISTANT ENGINEER

Asst. Executive Engineer
Project
Yalahanka Zone

ASSISTANT EXECUTIVE ENGINEER

Sl NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	L	Crank length (42d)	Actual Length	Total Length	Weight	Total weight
			mm			m	m	m	m	kg/m	Kg's
	1st flight	1									
	16# @140c/c main		16	15	15	6.15	0.00	6.15	93.8	1.58	148.03
	10# @200c/c dis		10	35	35	1.43	0.00	1.43	50.1	0.62	30.90
	Extra at top										
	16# @140c/c main		16	11	11	2.95	0.00	2.95	33.0	1.58	52.05
	8# @200c/c dis		10	21	21	1.43	0.00	1.43	29.5	0.62	18.16
	2nd flight	1									
	16# @140c/c main		16	15	15	6.30	0.00	6.30	96.1	1.58	151.64
	8# @200c/c dis		10	36	36	1.43	0.00	1.43	51.3	0.62	31.63
	Extra at top										
	16# @140c/c main		16	15	15	2.45	0.00	2.45	37.4	1.58	58.97
	8# @200c/c dis		10	17	17	1.43	0.00	1.43	24.7	0.62	15.23
	SUMP										
	longer side	2	12	31	62	7.00	0.00	7.00	434.0	0.89	385.31
		2	12	71	142	3.00	0.00	3.00	426.0	0.89	378.21
	Shorter side	2	12	31	62	7.00	0.00	7.00	434.0	0.89	385.31
		2	12	71	142	3.00	0.00	3.00	426.0	0.89	378.21
	Slab	2	12	31	62	3.00	0.00	3.00	186.0	0.89	165.13
	12# @100c/c main	2	12	31	62	3.00	0.00	3.00	186.0	0.89	165.13
	chair	2	8	31	62	3.00	0.00	3.00	186.0	0.39	73.39
			Sub Total								**2437.30**
			Total Steel Quantity in Kg								**13429.47**
			Total Steel Quantity in Kg								**13429.47**
			Total Steel Quantity in tonne								**13.43**

A.E.E. (Project)

A.E.E. (Project)

CONTRACTOR

CONSULTANT

22/2/23

ASSISTANT ENGINEER

ASSISTANT EXECUTIVE ENGINEER

BBMP, Bangalore - 92

NAME OF WORK :"Construction of Samudhaya Bhavana Building and Bus shelter & providing grill fencing and other development works at 407 SFS park, 707 SFS park, Sri madivala machideva park and Major Sandeep Unnikrishnan Park of Yelahanka Assembly Constituency Under Amrutha Nagarothana Grants (PACKAGE-02)"

Agency	Sri.K Lakshmi Narayana Reddy (M/S.LNR Ventures Constructions pvt.Ltd)
Description	Steel calculation sheet

PREMEASUREMENT SHEET - Second & Final Bill

Sl NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	L	Crank length (42d)	Actual Length	Total Length	Weight	Total weight
			mm			m	m	m	m	kg/m	Kg's
45	Providing Thermo-Mechanically Treated bars of grade Fe-500D or more Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position, binding and anchoring to adjacent members whereever necessary complete as per Design including cost of material, labour, usage charges complete as per specifications.										
Measurements taken on		28/2/23 to 5/04/23									
4	COLUMNS										
	upto Roof Beam										
	C1	4	16	10	40	3.65	0.00	3.65	146.00	1.58	230.44
	Rectangle Rings #8 @ 200 c/c	4	8	20	80	1.30	0.00	1.30	104.00	0.39	41.04
	Rectangle Rings #8 @ 200 c/c	4	8	20	80	1.00	0.00	1.00	80.00	0.39	31.57
	C2	6	12	6	36	3.65	0.00	3.65	131.40	0.89	116.66
		6	16	4	24	3.65	0.00	3.65	87.60	1.58	138.26
	Rectangle Rings #8 @ 200 c/c	6	8	20	120	1.30	0.00	1.30	156.00	0.39	61.56
	Rectangle Rings #8 @ 200 c/c	6	8	20	120	1.00	0.00	1.00	120.00	0.39	47.35
	C3	4	16	12	48	3.65	0.00	3.65	175.20	1.58	276.52
	Rectangle Rings #8 @ 200 c/c	4	8	20	80	1.50	0.00	1.50	120.00	0.39	47.35
	Rectangle Rings #8 @ 200 c/c	4	8	20	80	1.20	0.00	1.20	96.00	0.39	37.88
	C4	3	12	8	24	3.65	0.00	3.65	87.60	0.89	77.77
	Rectangle Rings #8 @ 200 c/c	3	8	20	60	0.92	0.00	0.92	55.20	0.39	21.78
	AboveRoof Beam										
	C1	4	16	10	40	1.20	0.00	1.20	48.00	1.58	75.76
	Rectangle Rings #8 @ 200 c/c	4	8	7	28	1.30	0.00	1.30	36.40	0.39	14.36
	Rectangle Rings #8 @ 200 c/c	4	8	7	28	1.00	0.00	1.00	28.00	0.39	11.05

A.E.E. (Project)

CONTRACTOR | CONSULTANT | ASSISTANT ENGINEER | Asst. Executive Engineer, Yelahanka Zone | ASSISTANT EXECUTIVE ENGINEER

29.35

Sl NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	L	Crank length (42d)	Actual Length	Total Length	Weight	Total weight
			mm			m	m	m	m	kg/m	Kg's
	C2	6	12	6	36	1.20	0.00	1.20	43.20	0.89	38.35
		6	16	4	24	1.20	0.00	1.20	28.80	1.58	45.46
	Rectangle Rings #8 @ 200 c/c	6	8	7	42	1.30	0.00	1.30	54.60	0.39	21.54
	Rectangle Rings #8 @ 200 c/c	6	8	7	42	1.00	0.00	1.00	42.00	0.39	16.57
	C3	4	16	12	48	1.20	0.00	1.20	57.60	1.58	90.91
	Rectangle Rings #8 @ 200 c/c	4	8	7	28	1.50	0.00	1.50	42.00	0.39	16.57
	Rectangle Rings #8 @ 200 c/c	4	8	7	28	1.20	0.00	1.20	33.60	0.39	13.26
	C4	2	12	8	16	1.20	0.00	1.20	19.20	0.89	17.05
	Rectangle Rings #8 @ 200 c/c	2	8	7	14	0.92	0.00	0.92	12.88	0.39	5.08
									Sub Total		1494.14
	Lintel Beam										
	LB (150X150)										
	top bars	1	12	2	2	9.30	0.00	9.30	18.60	0.89	16.51
	bottom bars	1	12	2	2	9.30	0.00	9.30	18.60	0.89	16.51
	2LGD 8# stirrups @ 150 C/C	1	8	63	63	0.60	0.00	0.60	37.80	0.39	14.92
	LB (200X150)										
	top bars	2	12	2	4	9.30	0.00	9.30	37.20	0.89	33.03
	bottom bars	2	12	2	4	9.30	0.00	9.30	37.20	0.89	33.03
	2LGD 8# stirrups @ 150 C/C	2	8	63	126	0.70	0.00	0.70	88.20	0.39	34.80
	LB (200X150)										
	top bars	2	12	2	4	12.00	0.00	12.00	48.00	0.89	42.62

1229.3

A.E.E. (Project)

191.41

CONTRACTOR

CONSULTANT

ASSISTANT ENGINEER

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bengaluru - 92

ASSISTANT EXECUTIVE ENGINEER

Sl NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	L	Crank length (42d)	Actual Length	Total Length	Weight	Total weight
			mm			m	m	m	m	kg/m	Kg's
	bottom bars	2	12	2	4	12.00	0.00	12.00	48.00	0.89	42.62
	2LGD 8# stirrups @ 150 C/C	2	8	81	162	0.70	0.00	0.70	113.40	0.39	44.75
	LB (150X150)										
	top bars	1	12	2	2	3.00	0.00	3.00	6.00	0.89	5.33
	bottom bars	1	12	2	2	3.00	0.00	3.00	6.00	0.89	5.33
	2LGD 8# stirrups @ 150 C/C	1	8	21	21	0.70	0.00	0.70	14.70	0.39	5.80
	LB (150X150)										
	top bars	2	12	2	4	5.60	0.00	5.60	22.40	0.89	19.89
	bottom bars	2	12	2	4	5.60	0.00	5.60	22.40	0.89	19.89
	2LGD 8# stirrups @ 150 C/C	2	8	38	77	0.60	0.00	0.60	46.00	0.39	18.15
	top bars	3	10	2	6	3.00	0.00	3.00	18.00	0.62	11.10
	bottom bars	3	12	2	6	2.90	0.00	2.90	17.40	0.89	15.45
	2LGD 8# stirrups @ 150 C/C	3	8	20	61	0.60	0.00	0.60	36.60	0.39	14.44
									Sub Total		**394.14**
	Chajja										
	Ground Floor										
	W	2									
	Main bars 8# @130 c/c at top		10	13	25	0.55	0.00	0.55	13.79	0.62	8.50
	Distribution bars 8# @200 c/c		8	4	8	1.50	0.00	1.50	11.25	0.39	4.44
	W	2									
	Main bars 8# @130 c/c at top		10	13	25	0.90	0.00	0.90	22.57	0.62	13.91
	Distribution bars 8# @200 c/c		8	6	11	1.50	0.00	1.50	16.50	0.39	6.51
	W1	1									
	Main bars 8# @130 c/c at top		10	10	10	0.55	0.00	0.55	5.63	0.62	3.47
	Distribution bars 8# @200 c/c		8	4	4	1.20	0.00	1.20	4.50	0.39	1.78
		1									
	Main bars 8# @130 c/c at top		10	10	10	0.90	0.00	0.90	9.21	0.62	5.68

CONTRACTOR

CONSULTANT

ASSISTANT ENGINEER

Asst. Executive Engineer
Project Division
ASSISTANT EXECUTIVE ENGINEER

SI NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	L	Crank length (42d)	Actual Length	Total Length	Weight	Total weight
			mm			m	m	m	m	kg/m	Kg's
	Distribution bars 8# @200 c/c		8	6	6	1.20	0.00	1.20	6.60	0.39	2.60
									Sub Total		46.89
	Roof Beam										
	B1(200X450)	1									
	top bars		12	2	2	16.15	0.00	16.15	32.30	0.89	28.68
	Top extra bars		12	2	2	3.00	0.00	3.00	6.00	0.89	5.33
			16	2	2	2.70	0.00	2.70	5.40	1.58	8.52
			12	3	3	7.90	0.00	7.90	23.70	0.89	21.04
	bottom bars		16	2	2	14.85	0.00	14.85	29.70	1.58	46.88
	bottom extra bars		12	2	2	9.00	0.00	9.00	18.00	0.89	15.98
	2LGD 8# stirrups @ 100 C/C		8	150	150	1.30	0.00	1.30	194.35	0.39	76.69
	B2(200X600)	2									
	top bars		20	3	6	12.90	0.00	12.90	77.40	2.47	190.88
	top extra bars		16	3	6	3.15	0.00	3.15	18.90	1.58	29.83
			16	3	6	5.85	0.00	5.85	35.10	1.58	55.40
	bottom bars		20	3	6	9.80	0.00	9.80	58.80	2.47	145.01
	bottom extra bars		20	3	6	5.90	0.00	5.90	35.40	2.47	87.30
			16	1	2	4.92	0.00	4.92	9.84	1.58	15.52
			16	2	4	4.89	0.00	4.89	19.57	1.58	30.88
	2LGD 8# stirrups @ 125 C/C		10	72	144	1.60	0.00	1.60	231.04	0.62	142.44
	B2(200X450)	1									
	top bars		16	3	3	5.95	0.00	5.95	17.85	1.58	28.17
	bottom bars		12	2	2	3.85	0.00	3.85	7.70	0.89	6.84
	2LGD 8# stirrups @ 125 C/C		8	25	25	1.30	0.00	1.30	31.98	0.39	12.62
	B3(200X450)	1									
	top bars		16	2	2	12.80	0.00	12.80	25.60	1.58	40.41
	top extra bars		12	3	3	1.80	0.00	1.80	5.40	0.89	4.79
			16	2	2	2.60	0.00	2.60	5.20	1.58	8.21
			12	3	3	4.85	0.00	4.85	14.55	0.89	12.92
	bottom bars		16	2	2	12.50	0.00	12.50	25.00	1.58	39.46
	bottom extra bars		12	3	3	5.00	0.00	5.00	15.00	0.89	13.33
			12	2	2	4.50	0.00	4.50	9.00	0.89	7.99
			12	2	2	2.05	0.00	2.05	4.10	0.89	3.64

A.E.E. (Project)

CONTRACTOR CONSULTANT ASSISTANT ENGINEER

Asst. Executive Engineer
ASSISTANT EXECUTIVE ENGINEER
Yelahanka Zone

SI NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	L	Crank length (42d)	Actual Length	Total Length	Weight	Total weight
			mm			m	m	m	m	kg/m	Kg's
	2LGD 8# stirrups @ 100 C/C		8	119	119	1.30	0.00	1.30	154.70	0.39	61.04
	B4(200X450)	1									
	top bars		16	2	2	9.90	0.00	9.90	19.80	1.58	31.25
	top extra bars		12	2	2	1.50	0.00	1.50	3.00	0.89	2.66
			12	2	2	5.20	0.00	5.20	10.40	0.89	9.23
	bottom bars		20	2	2	9.90	0.00	9.90	19.80	2.47	48.83
	bottom extra bars		12	1	1	5.60	0.00	5.60	5.60	0.89	4.97
	2LGD 8# stirrups @ 175 C/C		8	52	52	1.30	0.00	1.30	67.41	0.39	26.60
	B5(200X450)	1									
	top bars		16	2	2	9.90	0.00	9.90	19.80	1.58	31.25
	top extra bars		12	2	2	1.50	0.00	1.50	3.00	0.89	2.66
			12	2	2	5.20	0.00	5.20	10.40	0.89	9.23
	bottom bars		20	2	2	9.90	0.00	9.90	19.80	2.47	48.83
	bottom extra bars		12	1	1	5.60	0.00	5.60	5.60	0.89	4.97
	2LGD 8# stirrups @ 175 C/C		8	52	52	1.30	0.00	1.30	67.41	0.39	26.60
	B6(200X450)	1									
	top bars		16	2	2	9.90	0.00	9.90	19.80	1.58	31.25
	top extra bars		12	2	2	1.50	0.00	1.50	3.00	0.89	2.66
			12	2	2	5.20	0.00	5.20	10.40	0.89	9.23
	bottom bars		20	2	2	9.90	0.00	9.90	19.80	2.47	48.83
	bottom extra bars		12	1	1	5.60	0.00	5.60	5.60	0.89	4.97
	2LGD 8# stirrups @ 175 C/C		8	52	52	1.30	0.00	1.30	67.41	0.39	26.60
	B7(200X450)	1									
	top bars		16	2	2	5.10	0.00	5.10	10.20	1.58	16.10
	top extra bars		12	2	2	3.20	0.00	3.20	6.40	0.89	5.68
	bottom bars		16	4	4	5.10	0.00	5.10	20.40	1.58	32.20
	bottom extra bars		12	1	1	3.50	0.00	3.50	3.50	0.89	3.11
	2LGD 8# stirrups @ 175 C/C		8	26	26	1.30	0.00	1.30	33.24	0.39	13.12
	B2(200X450)										
	top bars		16	2	2	3.45	0.00	3.45	6.90	1.58	10.89

CONTRACTOR

CONSULTANT

ASSISTANT ENGINEER

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore - 92

ASSISTANT EXECUTIVE ENGINEER

A.E.E. (Project)

Sl NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	L	Crank length (42d)	Actual Length	Total Length	Weight	Total weight
			mm			m	m	m	m	kg/m	Kg's
	bottom bars		12	2	2	2.60	0.00	2.60	5.20	0.89	4.62
			16	2	2	3.45	0.00	3.45	6.90	1.58	10.89
	2LGD 8# stirrups @ 125 C/C		8	24	24	1.30	0.00	1.30	30.94	0.39	12.21
	Stair Case beam	1									
	top bars		16	2	2	3.45	0.00	3.45	6.90	1.58	10.89
	bottom bars		20	2	2	3.45	0.00	3.45	6.90	2.47	17.02
	2LGD 8# stirrups @ 125 C/C		8	24	24	1.30	0.00	1.30	30.94	0.39	12.21
									Sub Total		**1659.36**
	Roof Slab										
	Slab between Grid 1-2 and grid A-D	1									
	10# @100 c/c main bars alt	1	12	90	90	4.20	1.01	5.21	468.72	0.89	416.14
	10# @180 c/c Distrubution	1	10	36	36	8.90	0.84	9.74	350.64	0.62	216.18
	Slab between Grid 2-3 and grid A-D	1									
	10# @100 c/c main bars alt	1	12	90	90	4.65	1.01	5.66	509.22	0.89	452.69
	10# @180 c/c Distrubution	1	10	40	40	8.90	0.84	9.74	387.17	0.62	238.70
	Slab between Grid 3-4 and grid A-D	1									
	10# @100 c/c main bars alt	1	12	90	90	4.25	1.01	5.26	473.22	0.89	420.13
	10# @180 c/c Distrubution	1	10	36	36	8.90	0.84	9.74	354.70	0.62	218.68
	Slab between Grid 1-2 and grid D-E	1									
	10# @100 c/c main bars alt	1	12	50	50	4.20	1.01	5.21	257.80	0.89	228.87
	8# @100 c/c Distrubution	1	10	43	43	4.85	0.84	5.69	244.67	0.62	150.85
	Slab between Grid 2-3 and grid D-E	1									
	10# @100 c/c main bars alt	1	12	50	50	4.65	1.01	5.66	280.07	0.89	248.65

CONTRACTOR

CONSULTANT

ASSISTANT ENGINEER

Asst. Executive Engineer
Project Division
Yelahanka Zone
BDA, Bangalore - 92

ASSISTANT EXECUTIVE ENGINEER

SI NO	Description	Nos	BAR DIA	No. Bars	Total No. bars	L	Crank length (42d)	Actual Length	Total Length	Weight	Total weight
			mm			m	m	m	m	kg/m	Kg's
	10# @100 c/c Distrubution	1	10	48	48	4.85	0.84	5.69	270.28	0.62	166.63
	Slab between Grid 3-4 and grid D-E	1									
	10# @100 c/c main bars alt	1	12	45	45	4.25	1.01	5.26	236.61	0.89	210.07
	8# @100 c/c Distrubution	1	10	44	44	4.40	0.84	5.24	227.94	0.62	140.53
	Slab between Grid 1-3 and grid E-F	1									
	10# @100 c/c main bars alt	1	12	44	44	2.85	1.01	3.86	169.75	0.89	150.71
	10# @100 c/c Distrubution	1	10	30	30	4.30	0.84	5.14	151.63	0.62	93.49
	chairs	2	8	32	64	14.20	0.67	14.87	951.81	0.39	375.57
		2	8	48	97	9.30	0.67	9.97	963.96	0.39	380.36
	For Tank										
	10# @100 c/c main bars alt	1	10	17	17	1.30	0.84	2.14	36.38	0.62	22.43
	10# @100 c/c Distrubution	1	10	14	14	1.60	0.84	2.44	34.16	0.62	21.06
									Sub Total		**4151.15**
	STAIRCASE										
	1st flight	1									
	16# @140c/c main		16	15	15	6.15	0.00	6.15	93.8	1.58	148.03
	10# @200c/c dis		10	35	35	1.43	0.00	1.43	50.1	0.62	30.90
	Extra at top										
	16# @140c/c main		16	11	11	2.95	0.00	2.95	33.0	1.58	52.03
	8# @200c/c dis		10	21	21	1.43	0.00	1.43	29.5	0.62	18.16
	2nd flight	1									
	16# @140c/c main		16	15	15	6.30	0.00	6.30	96.1	1.58	151.64
	8# @200c/c dis		10	36	36	1.43	0.00	1.43	51.3	0.62	31.63
	Extra at top										
	16# @140c/c main		16	15	15	2.45	0.00	2.45	37.4	1.58	58.97
	8# @200c/c dis		10	17	17	1.43	0.00	1.43	24.7	0.62	15.23
									Sub Total		**506.60**
									Total Steel Quantity in Kg		**8252.29**
									Total Steel Quantity in Kg		**8252.29**
									Total Steel Quantity in tonne		**8.25**

CONTRACTOR

CONSULTANT

ASSISTANT ENGINEER

A.E.E. (Project)

Asst. Executive Engineer
ASSISTANT EXECUTIVE ENGINEER
Project Division
Yelahanka Zone